Hanford Tank Farms Vadose Zone Monitoring Project
Quarterly Summary Report for 2nd Quarter FY 2002

Introduction

Routine quarterly reports for the Hanford Tank Farms Vadose Zone Monitoring Project (VZMP) are issued to summarize the results of monitoring performed, provide the status of any on-going special investigations, and provide an updated listing of borehole intervals where monitoring is planned in the coming months.

VZMP Monitoring Results

A summary of monitoring operations from January 1 to March 31, 2002 is included in Table 1.

Table 1. Summary of Monitoring Operations

Month	January	February	March	FY Cumulative Total
Total Boreholes	35	3	36	128
Main Log Footage	2118	140	2029	7628
Rerun Log Footage	80	0	115	390
Total Footage	2198	140	2144	8018

Table 2 (attached) provides further details of operations including borehole number, tank number, logging depths and footage, the Radionuclide Assessment System (RAS) detector size (small, medium, large), total score, projected next monitoring date, the date of RAS monitoring events, and a comment section. This table is derived from the database "Prioritized Listing of Borehole Monitoring Intervals" included in the Baseline Monitoring Plan issued June 2001 (DOE 2001). The database is continually updated as boreholes are monitored. The most important change that occurs in the database is the monitoring frequency. Where monitoring results suggest possible contaminant movement, the monitoring frequency may be changed.

Since December 2001, possible contaminant movement has been identified in three additional boreholes: 50-04-10 and 50-09-02 in T Farm and 21-27-08 in BX Farm. The attached plots show a comparison of the current RAS and the Spectral Gamma Logging System (SGLS) baseline total gamma profiles for these boreholes and indicate the depth intervals of suspected contaminant movement. The dominant contaminant detected in these T Farm and BX Farm boreholes is cobalt-60 (^{60}Co) and processed uranium, respectively. Processed uranium is inferred from the 1001-keV protactinium-234 (^{234m}Pa) energy peak, and uranium-235 (^{235}U) is measured directly by the 186-keV gamma energy peak.

Boreholes 50-04-10 and 21-27-08 were originally selected for a biannual monitoring frequency and are proposed to remain on that schedule. The monitoring frequency for borehole 50-09-02, originally scheduled for annual monitoring, will be changed to biannual. In the interest of brevity, plots for boreholes where no apparent change was observed will not be included in this report. These logs are available on request.

Special Investigations

A special investigation of boreholes around tank U-107 (U Farm), requested by the DOE-ORP Project Manager to support waste retrieval operations and initiated during June 2001, continues. The third monitoring event for selected boreholes was initiated on December 26, 2001 and completed early in the second quarter of FY 2002. Initial indications of contaminant movement identified during the baseline characterization and first RAS monitoring event have not been confirmed by the subsequent two monitoring events. It is likely that the time elapsed between monitoring events has not been sufficient to detect slow movement of contaminants in the vadose zone. It is recommended these boreholes continue to be monitored on a quarterly basis until the waste retrieval operations are completed. The next scheduled monitoring event in U Farm is April 2002.

Since the monitoring project started in June 2001, one or more regions of high gamma flux that are beyond the range of the RAS detection system have been identified to exist in 20 boreholes that were monitored. A review of the baseline characterization data identified five additional boreholes that have yet to be monitored by the RAS but exhibit high gamma flux zones. The high rate logging system (HRLS) is required to collect data in these 25 boreholes to assess potential changes. A letter dated March 27, 2002 to CH2M Hill Hanford Group management (Pearson 2002) outlined the boreholes anticipated to be logged with the HRLS during the remainder of the fiscal year and described support MACTEC-ERS would require of CH2M Hill Hanford Group to accomplish the task. The high rate logging will be conducted according to the availability of the HRLS and logistical support. This work is tentatively scheduled to begin in SX Farm during April 2002.

No other special logging investigation requests or other re-prioritization of boreholes for monitoring have been received or identified during this reporting period.

Operational Issues

During the 4th quarter of FY 2001, it was determined an average of approximately 1.5 boreholes were monitored each working day. This rate included all operational aspects of monitoring, including both scheduled and unscheduled down time for maintenance, operator support, security, etc. The rate of monitoring achieved during the 1st quarter of FY 2002 was about 1.0 borehole per day, and the rate during the 2nd quarter of FY 2002 was about 1.3 boreholes per day. The project goal is to achieve an average of 3 boreholes per day.

The monitoring rate (i.e., total boreholes/total work days-total days) was 3.1 boreholes per day during the 4th quarter of FY 2001, indicating the goal should be achievable if down time is minimized. If down time of about 7 days due to calibration is omitted from the 2nd quarter totals, the rate achieved is about 2.7 boreholes per day, which is a considerable improvement from the 1st to 2nd quarter. Corrective actions implemented to improve the efficiency of the monitoring operations at the end of the 1st quarter have resulted in improved operator/HPT support. These actions included increasing the priority of the RAS monitoring project within Tank Farm operations, and exempting RAS operators from routine morning meetings. Tank Farms

management and the RAS operators have made a significant effort to improve the efficiency of the monitoring operations. The project did experience 58 hours of down time this quarter due to administrative issues such as dome loading and a stop work order issued by the HPT's concerning swabbing of boreholes prior to monitoring. Both of these issues have been resolved and further delays are not anticipated.

Tables 3a and 3b include summaries of production and operational issues, respectively, that affect monitoring production.

Table 3a. Summary of Monitoring Production

Quarter	Total Work Days	Total Days Down	Total Boreholes Monitored	Boreholes Monitored per Day
4th of FY01	56	29.3	84	1.5
1st of FY02	56	35.2	54	1.0
2nd of FY02	55	34.1	74	1.3
3rd of FY02	N/A[1]	N/A	N/A	N/A
Cumulative Total	167	98.6	212	N/A
Average/Quarter	55.7	32.9	70.7	1.3

[1] N/A – not applicable

Table 3b. Summary of Operational Down Time

Quarter	Equipment/ Truck Problems (hrs)	No HPT/ Operator Support (hrs)	Security Measures (hrs)	No Charge Code or Administrative (hrs)	Moving Truck (hrs)	Weather (hrs)	Misc. (hrs)	Total Down Time (hrs)
4th of FY01	64	130	20	27	20	3	0	264
1st of FY02	107	84	51	44	14	13	4	317
2nd of FY02	143	40	24	58	9	18	15	307
3rd of FY02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Total	314	254	95	129	43	34	19	888
Average/Quarter	104.7	84.7	31.7	43	14.3	11.3	6.3	296

Corrective actions currently being implemented to decrease the down time caused by equipment problems include: 1) improvements to the telemetry section, 2) building of a spare telemetry section, and 3) increased sheave wheel maintenance. Down time characterized as equipment problems this quarter includes 53 hours for the annual monitoring system calibration measurements.

Future Monitoring Operations

Table 4 (attached) provides a summary by tank farm of prioritized boreholes available for monitoring through the end of the 3rd quarter of FY 2002. This list includes all boreholes with a total score in excess of 30 and a next monitoring date that is overdue or will become overdue within 90 days and likely contains more boreholes than can actually be monitored during the quarter. The high rate logging is not considered in this list but will be conducted concurrently with the RAS monitoring. It is anticipated tank farms SX, U, C, TY, TX, B, S, AX, and A will be visited during the 3rd quarter of FY 2002.

References

Pearson, A.W., 2002. Letter to Jim Adrian, CH2M Hill Hanford Group, Subject: "Repeat High-Rate Logging in Tank Farms," 3100-T02-0479, MACTEC-ERS, Richland, Washington.

U.S. Department of Energy (DOE), 2001. *Hanford Tank Farms Vadose Zone Monitoring Project, Baseline Monitoring Plan*, MAC-HGLP 1.8.1, Revision 0, Grand Junction Office, Grand Junction, Colorado.

Table 2. Boreholes Monitored During Second Quarter FY 2002

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
41-00-08	SX-109	40	85	45		L	2	58	09/24/02	08/20/01	03/28/02		No apparent change
41-09-06	SX-109	40	74	34	10	L	0.75	27	03/02/07	03/28/02			No apparent change
41-09-11	SX-109	40	74	34	10	L	0.75	27	03/02/07	03/28/02			No apparent change
41-10-11	SX-110	45	75	30		L	0.75	23	03/02/07	03/28/02			No apparent change
41-02-05	SX-102	40	80	40		L	0	32	03/01/07	03/27/02			No apparent change
41-08-03	SX-108	40	75	35	10	L	0.75	34	03/01/07	03/27/02			No apparent change
41-08-06	SX-108	40	80	40		L	0.75	34	03/01/07	03/27/02			No apparent change
41-09-02	SX-109	40	74	34		L	1	33	03/22/03	03/27/02			No apparent change
41-02-02	SX-102	25	140	115		L	2	82	09/22/02	09/07/01	03/26/02		Possible change; possible Sr-90
41-02-07	SX-102	40	80	40		L	0	32	02/28/07	03/26/02			No apparent change
41-03-02	SX-103	30	80	50	10	L	1	45	03/21/03	03/26/02			No apparent change
41-03-05	SX-103	40	80	40		L	1	45	03/21/03	03/26/02			No apparent change
21-01-01	BX-101	15	99	89		L/M	1	33	03/20/03	03/25/02			No apparent change
21-06-05	BX-106	25	75	55		L/M	1	26	03/20/03	03/25/02			No apparent change
21-11-03	BX-111	35	99	69		M/S	1	32	03/20/03	03/25/02			No apparent change
21-11-04	BX-111	35	75	45		L/S	1	32	03/16/03	03/21/02			No apparent change
21-00-21	BX-111	35	90	55	15	L	1	32	03/15/03	03/20/02			No apparent change
21-00-22	BX-111	20	73	53		L	1	32	03/15/03	03/20/02			No apparent change
21-11-05	BX-111	35	75	40	10	L	1	32	03/15/03	03/20/02			No apparent change
21-11-07	BX-111	35	75	40		L	1	32	03/15/03	03/20/02			No apparent change
21-05-06	BX-105	35	100	65		L	1	28	03/14/03	03/19/02			No apparent change
21-08-06	BX-107	35	75	40		L	0.5	24	02/21/07	03/19/02			No apparent change
21-08-05	BX-108	30	80	50	10	L	0.5	16	02/21/07	03/19/02			No apparent change
21-08-07	BX-108	30	100	70		L	1	28	03/14/03	03/19/02			No apparent change
21-00-09	BX-111	35	73	38		L	1	32	03/14/03	03/19/02			No apparent change
21-04-04	BX-104	20	75	55		L	0	2	02/20/07	03/18/02			No apparent change
21-04-06	BX-104	20	75	55		L	0	2	02/20/07	03/18/02			No apparent change
21-04-11	BX-104	35	97	62	10	L	1	27	03/13/03	03/18/02			No apparent change
21-05-05	BX-105	35	99	64		L	1	28	03/13/03	03/18/02			No apparent change
21-00-05	BX-101	35	125	90	10	L	1	33	03/09/03	03/14/02			No apparent change
21-27-11	BX-102	30	138	108		L	2	106	09/10/02	08/20/01	03/14/02		No apparent change
21-03-07	BX-103	35	80	45	10	L	0.5	16	02/16/07	03/14/02			No apparent change
21-01-02	BX-101	35	98	63		L	1	33	03/08/03	03/13/02			No apparent change
21-02-03	BX-102	35	99	64		L	2	106	09/09/02	08/14/01	03/13/02		No apparent change
21-27-01	BX-102	35	99	64		L	2	106	09/09/02	08/28/01	03/13/02		No apparent change
21-27-08	BX-102	35	149	114	10	L	2	106	09/09/02	08/14/01	03/13/02		Apparent change 137.5-148.5 ft
21-03-03	BX-103	35	90	55		L	2	54	08/24/02	08/28/01	02/25/02		No apparent change
21-03-05	BX-103	35	80	45		L	1	29	02/20/03	02/25/02			No apparent change
21-03-11	BX-103	35	75	40		L	0.5	16	01/30/07	02/25/02			No apparent change
50-06-18	T-106	50	130	110		M/S	2	143	07/28/02	07/24/01	01/29/02		No apparent change
50-07-03	T-107	30	70	40		M	0.5	29	01/02/07	01/28/02			No apparent change

Table 2. Boreholes Monitored During Second Quarter FY 2002

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
50-09-01	T-109	30	86	56		M	2	54	07/27/02	07/23/01	11/08/01	01/28/02	Apparent change at 85 ft not confirmed
50-04-08	T-104	30	96	66		M	2	55	07/23/02	07/31/01	01/24/02		No apparent change
50-00-05	T-110	30	70	40		M	0.5	20	12/29/06	01/24/02			No apparent change
50-01-09	T-101	30	90	60		M	2	62	07/21/02	07/30/01	11/08/01	01/22/02	Apparent change at 86-90 ft not confirmed
50-02-02	T-102	30	70	40		M	0.75	24	12/27/06	01/22/02			No apparent change
50-02-05	T-102	30	85	55		M	2	55	07/21/02	07/25/01	01/22/02		No apparent change
50-04-10	T-104	35	88	53		M	2	55	07/21/02	07/31/01	01/22/02		Apparent change 67-68 ft
50-04-07	T-104	20	70	50	10	M	0.75	23	12/26/06	01/21/02			No apparent change
50-02-09	T-102	30	85	55		M	1	30	01/11/03	01/16/02			No apparent change
50-08-09	T-108	30	100	70		M	1	27	01/11/03	01/16/02			No apparent change
50-09-10	T-109	30	120	90		M	2	54	07/15/02	07/23/01	11/07/01	01/16/02	Apparent change at 76 and 94 ft not confirmed
50-06-02	T-106	30	122	92		M	2	143	07/14/02	07/19/01	11/07/01	01/15/02	Apparent change at 110 ft not confirmed
50-06-03	T-106	30	118	88	10	M	2	143	07/14/02	07/18/01	11/12/01	01/15/02	Apparent change at 115 ft not confirmed
50-02-08	T-103	30	85	55	10	M	1	28	01/09/03	01/14/02			No apparent change
50-03-04	T-103	20	120	100		M	1	28	01/09/03	01/14/02			No apparent change
50-03-05	T-103	30	120	90		M	1	28	01/09/03	01/14/02			No apparent change
50-08-07	T-108	30	119	89	10		1	27	01/05/03	01/10/02			No apparent change
50-09-05	T-109	30	90	60	10	M	1	29	01/05/03	01/10/02			No apparent change
50-11-10	T-111	30	80	50		M	0.5	19	12/15/06	01/10/02			No apparent change
50-00-09	T-106	30	120	90		M	2	143	07/08/02	07/18/01	01/09/02		No apparent change
50-09-09	T-109	30	70	40		M	0.75	23	12/14/06	01/09/02			No apparent change
50-05-07	T-105	30	87	57	10	M	1	27	01/03/03	01/08/02			No apparent change
50-08-08	T-108	30	95	65		L	1	27	01/03/03	01/08/02			No apparent change
50-08-19	T-108	30	86	56		L	1	27	01/03/03	01/08/02			No apparent change
50-09-02	T-109	30	86	56		L	2	54	07/07/02	01/08/02			Apparent change 81-86 ft
60-00-02	U-101	35	75	40		L	0	27	12/12/06	01/07/02			No apparent change
60-08-10	U-108	35	75	40	10	L	0	19	12/12/06	01/07/02			No apparent change
60-04-08	U-104	40	105	65		L	2	94	04/03/02	07/16/01	10/22/01	01/03/02	Apparent change (74-78 and 84-89 ft) not confirmed
60-08-08	U-108	35	75	40		L	0	19	12/08/06	01/03/02			No apparent change
60-08-09	U-108	35	75	40		L	0	19	12/08/06	01/03/02			No apparent change
60-01-08	U-101	35	75	40	10	L	0	27	12/07/06	01/02/02			No apparent change
60-01-10	U-101	35	75	40		L	0	27	12/07/06	01/02/02			No apparent change
60-10-11	U-110	35	75	40		L	0	11	04/02/02	07/17/01	10/04/01	01/02/02	No apparent change

Table 4. Boreholes Projected for Monitoring During Third Quarter of FY 2002

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
10-00-07	A-101	45	85	40		M	0	89	06/15/02	06/20/01			No apparent change
10-00-08	A-101	45	85	40		M	0	89	06/20/02	06/25/01			No apparent change
10-01-01	A-101	45	85	40	10	L	0	89	06/22/02	06/27/01			No apparent change
10-01-03	A-101	45	78	33		L	0	89	06/22/02	06/27/01			No apparent change
10-01-04	A-101	35	85	50	20	L	1	114	06/22/02	06/27/01			No apparent change
10-01-05	A-101	45	85	40		M	0	89	06/15/02	06/20/01			No apparent change
10-01-06	A-101	45	85	40		L	0	89	06/22/02	06/27/01			No apparent change
10-01-08	A-101	45	85	40		L	0	89	06/22/02	06/27/01			No apparent change
10-01-09	A-101	45	63	18		L	0	89	06/21/02	06/26/01			No apparent change
10-01-10	A-101	45	85	40	15	L	0	89	06/22/02	06/27/01			No apparent change
10-01-11	A-101	45	85	40		L	0	89	06/22/02	06/27/01			No apparent change
10-01-16	A-101	20	52	32	10	M	1	114	06/14/02	06/19/01			No apparent change
10-01-28	A-101	20	43	23		M	1	114	06/14/02	06/19/01			No apparent change
10-01-39	A-101	20	44	24	14	M	1	114	06/15/02	06/20/01			No apparent change
10-02-01	A-102	45	95	50			1	32	11/13/97				
10-02-03	A-102	45	125	80			1	32	10/27/97				
10-02-08	A-102	45	95	50			1	32	11/03/97				BE - Cs-137
10-03-07	A-103	45	125	80			1	37	10/20/97				
10-05-02	A-105	45	120	75		M	0	115	06/20/02	06/25/01			No apparent change
10-05-05	A-105	45	74	29	20	L	0	115	06/20/02	06/25/01			No apparent change
10-05-07	A-105	45	75	30		L	0	115	06/21/02	06/26/01			No apparent change
10-05-08	A-105	45	55	10		L	0	115	06/21/02	06/26/01			No apparent change
10-05-09	A-105	45	77	32		L	0	115	06/21/02	06/26/01			No apparent change
10-05-10	A-105	25	100	75	15	L	1	140	06/21/02	06/26/01			No apparent change
10-05-12	A-105	45	75	30		L	0	115	06/21/02	06/26/01			No apparent change
11-01-01	AX-101	45	85	40			0	66	07/28/01				BE - Cs-137
11-01-02	AX-101	45	85	40			0	66	07/27/01				BE - Cs-137
11-01-04	AX-101	45	85	40			0	66	07/28/01				BE - Cs-137
11-01-05	AX-101	45	85	40			0	66	07/27/01				
11-01-07	AX-101	45	85	40			0	66	07/26/01				BE - Cs-137
11-01-09	AX-101	45	85	40			0	66	07/31/01				BE - Cs-137
11-01-10	AX-101	45	73	28			0	66	08/01/01				BE - Cs-137
11-01-11	AX-101	45	85	40			0	66	08/02/01				BE - Cs-137
11-03-02	AX-103	20	90	70			1	32	09/08/97				Cs-137 at 35 ft
20-00-05	B-101	35	110	75			1	39	08/16/98				Double casing
20-01-01	B-101	35	75	40			1	39	08/15/98				Hist. - short life at 54 ft
20-01-06	B-101	25	60	35			1	39	08/21/98				
20-03-06	B-103	35	75	40			1	35	04/30/00				BE - Cs-137; hist. at 37 ft
20-02-09	B-105	35	100	65			1	34	09/11/98				BE - Cs-137
20-05-06	B-105	35	120	85			1	34	08/20/98				BE - Cs-137 - 55-120 ft
20-06-03	B-106	35	75	40			1	33	11/13/99				
20-06-06	B-106	35	100	1			1	33	04/30/00				BE - Cs-137 - 58-100 ft

Table 4. Boreholes Projected for Monitoring During Third Quarter of FY 2002

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
20-07-02	B-107	35	100	65			1	38	11/27/99				BE - Cs-137 - 63-76 ft
20-07-11	B-107	35	80	45			1	38	05/05/00				Possible Sr-90 at 72 ft
20-09-06	B-109	35	100	65			1	31	09/14/98				
20-12-03	B-109	35	100	65			1	31	11/01/99				BE - Cs-137; hist. 60-90 ft
20-10-02	B-110	20	98	78			1	37	04/28/00				Possible Sr-90; BE - Cs-137
20-10-07	B-110	35	75	40			1	37	11/19/99				Hist. at 47 ft
20-10-12	B-110	20	120	100			1	37	10/22/99				BE - Cs-137 - 108-120 ft; Sr-90
20-11-09	B-111	35	75	40			1	35	08/28/98				
20-12-06	B-111	35	75	40			1	35	10/29/99				Possible Sr-90 at 45 ft
22-00-04	BY-102	40	99	59			1	31	07/26/96				BE - Cs-137
22-02-01	BY-102	40	98	58			1	31	07/18/96				
22-02-07	BY-102	170	260	90			1	31	03/30/00				BE-Cs-137; Co-60, Cs-137 at GW
22-02-09	BY-102	20	80	60			1	31	03/23/00				TGA 40-50 ft; BE - Cs-137
22-00-02	BY-103	40	99	59		L	2	63	05/14/02	11/15/01			No apparent change
22-03-04	BY-103	40	101	61	15	L	2	63	05/14/02	11/15/01			Possible change 77-82 ft
22-04-07	BY-104	40	100	60			1	31	07/28/96				BE - Cs-137; Co-60 - 90-99 ft
22-04-09	BY-104	40	124	84			1	31	08/02/96				BE - Cs-137; Co-60 - 85-124 ft
22-06-05	BY-106	20	98	78		L	2	76	05/26/02	11/27/01			No apparent change
22-07-02	BY-107	30	100	70		L	2	68	05/28/02	11/29/01			Apparent change 98-100 ft
22-07-05	BY-107	30	97	67	15	L	2	68	06/10/02	12/12/01			Apparent change 75-81 ft
22-07-07	BY-107	40	99	59		L	2	68	06/10/02	12/12/01			No apparent change
22-08-02	BY-108	25	103	78		L	2	74	06/11/02	12/13/01			No apparent change
22-08-05	BY-108	35	98	63		L	2	74	06/15/02	12/17/01			Apparent change 75-82 ft
22-08-12	BY-108	30	90	60		L	2	74	06/11/02	12/13/01			No apparent change
22-10-07	BY-110	40	80	40		L	2	53	06/09/02	12/11/01			No apparent change
30-01-01	C-101	30	70	40			0.5	31	02/28/02				BE - Cs-137
30-01-06	C-101	30	70	40			1	43	03/23/98				
30-01-09	C-101	20	70	50			1	43	03/19/98				
30-00-03	C-102	30	70	40			0	37	03/20/02				BE - Cs-137
30-03-01	C-103	30	125	95			1	54	04/12/98				BE - Cs-137
30-03-03	C-103	30	98	68			1	54	04/06/98				BE - Cs-137
30-03-09	C-103	30	98	68			1	54	04/03/98				BE - Cs-137
30-05-02	C-105	30	90	60			1	31	01/31/98				BE - Cs-137
30-05-03	C-105	30	90	60			1	31	01/29/98				BE - Cs-137
30-05-04	C-105	30	118	88			1	31	01/24/98				BE - Cs-137
30-05-05	C-105	30	98	68			1	31	01/24/98				BE - Cs-137
30-05-07	C-105	30	67	37			1	31	12/14/00				
30-05-08	C-105	30	49	19			1	31	01/19/98				BE - Cs-137
30-05-10	C-105	10	70	60			1	31	01/10/98				BE - Cs-137
30-00-01	C-106	30	67	37			1	38	04/09/98				BE - Cs-137
30-06-04	C-106	20	100	80			1	38	01/31/98				BE - Cs-137
30-06-09	C-106	25	80	55			1.5	50	01/29/98				BE - Cs-137

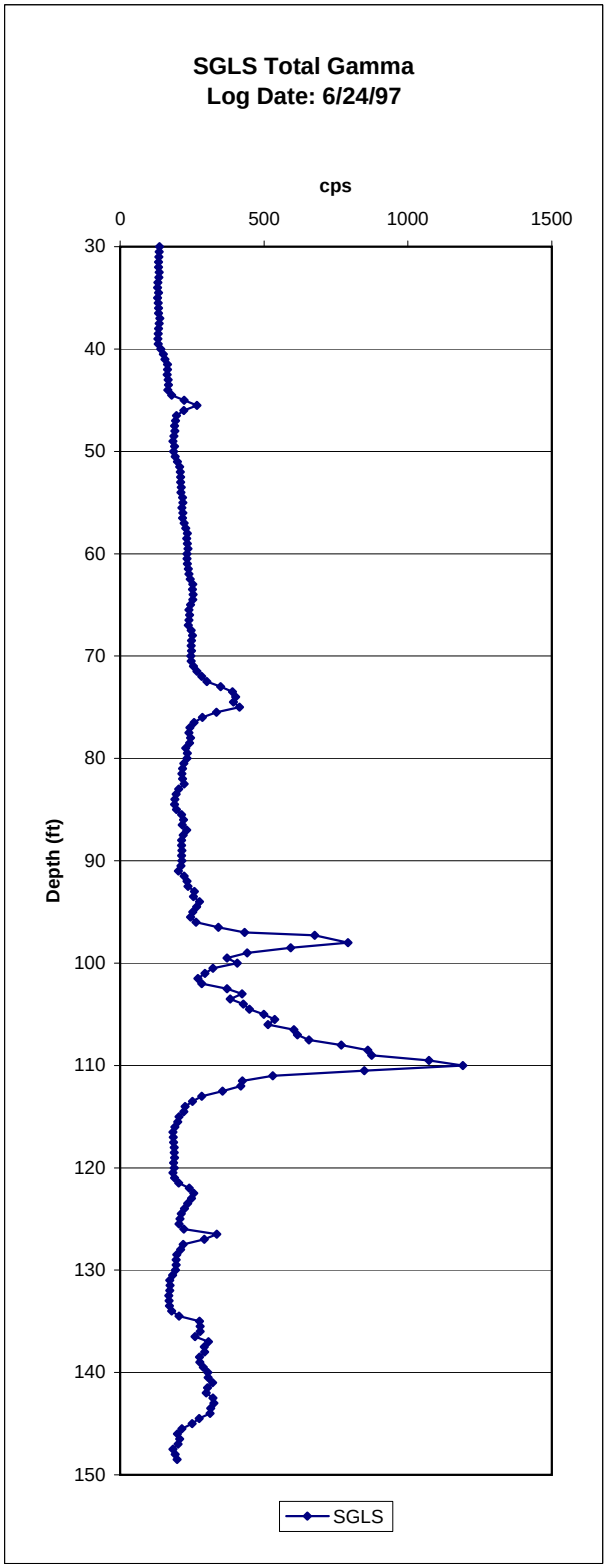
Table 4. Boreholes Projected for Monitoring During Third Quarter of FY 2002

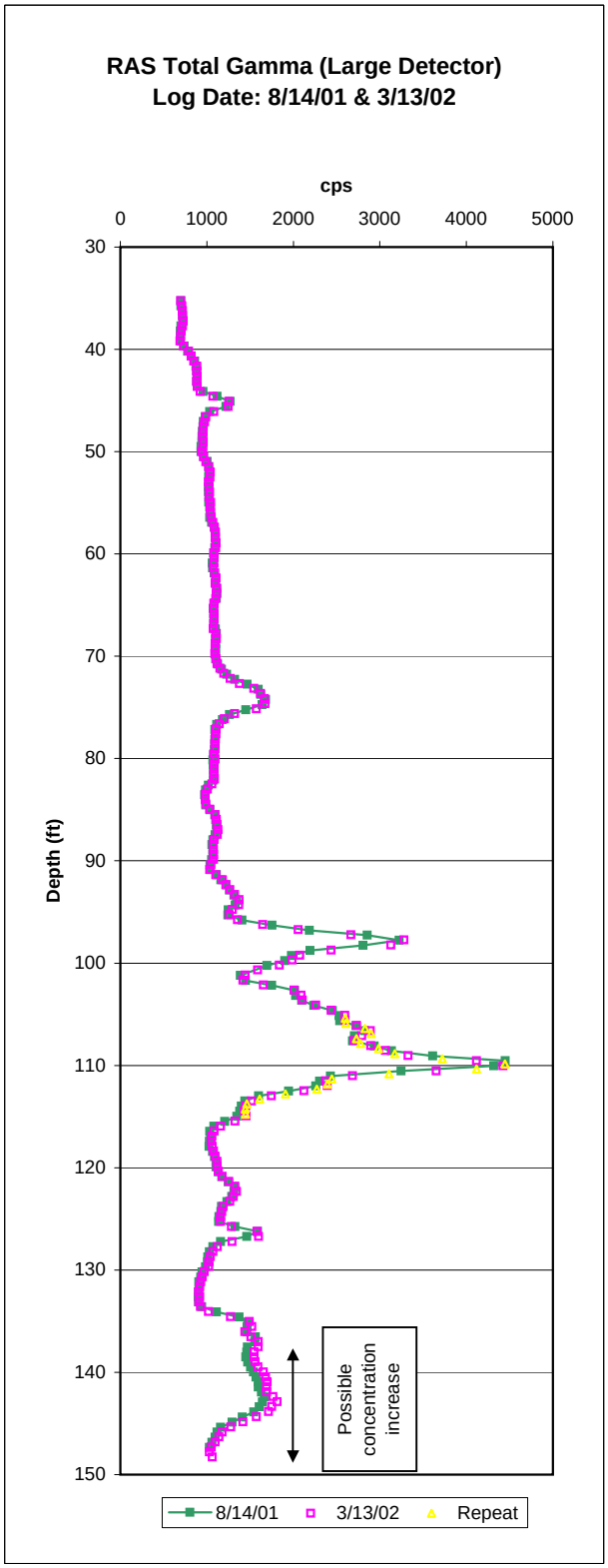
Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
30-06-10	C-106	30	129	99			2	63	08/30/99				BE - Cs-137
30-06-12	C-106	15	99	84			1.5	50	01/22/98				BE - Cs-137
30-09-06	C-109	30	98	68			1.5	42	03/27/98				BE - Cs-137
40-02-03	S-102	20	80	60			1	39	05/18/97				
40-02-07	S-102	20	80	60			1	39	05/24/97				
40-02-08	S-102	20	80	60			1	39	09/21/00				
40-03-05	S-103	40	80	40			1	39	06/02/97				BE - Cs-137
40-04-05	S-104	35	100	65			1	49	09/18/00				Stability not determined
40-04-07	S-104	35	80	45			1	49	05/19/97				
40-04-08	S-104	20	50	30			1	49	05/19/97				
40-07-01	S-107	35	80	45			1	48	06/05/97				Assuming 40-04-05 is not stable
40-00-06	S-111	40	80	40			0	39	06/28/01				BE - Cs-137
40-11-01	S-111	40	80	40			0	39	06/26/01				
40-11-05	S-111	40	80	40			0	39	06/30/01				
40-11-07	S-111	35	80	45			0	39	06/22/01				BE - Cs-137
40-11-08	S-111	40	80	40			0	39	06/23/01				
40-11-09	S-111	40	80	40			0	39	07/04/01				
41-07-07	SX-107	40	75	26		S	2	54	03/25/02	09/26/01			No apparent change; requires HRLS
41-07-08	SX-107	40	76	46		L/M	2	54	03/16/02	09/17/01			Log with medium detector
41-09-04	SX-109	40	102	62			2	58	03/08/00				Not logged due to borehole contamination
41-09-07	SX-109	40	73	35		L/S	2	58	04/01/02	10/03/01			No apparent change; requires HRLS
41-09-09	SX-109	40	95	67	10	L/S	2	58	04/01/02	10/03/01			No apparent change
41-10-01	SX-110	40	80	40	10	L	2	54	03/12/02	09/13/01			No apparent change
41-11-10	SX-111	40	95	57		L/M/S	2	53	03/24/02	09/25/01			No apparent change; requires HRLS
41-14-06	SX-114	30	76	46			1	31	07/11/96				
41-14-09	SX-114	40	75	35			1	31	07/13/96				BE - Cs-137
41-14-11	SX-114	40	75	35			1	31	07/13/96				BE - Cs-137
50-06-18	T-106	25	55	30		S	2	143	01/28/02	08/01/01			No apparent change
50-07-07	T-107	30	70	40			1	42	04/07/00				No log - water filled (06/18/01)
51-01-02	TX-101	40	80	40			1.5	41	01/24/00				
51-03-01	TX-103	40	80	40			1	30	12/22/96				BE - Cs-137
51-03-09	TX-103	40	100	60			2	55	07/26/99				
51-03-11	TX-103	40	100	60			1	30	12/14/96				
51-03-12	TX-103	40	100	60			1	30	12/16/96				BE - Cs-137; unstable
51-04-02	TX-104	40	80	40			1.5	42	01/22/00				Sb-125
51-04-05	TX-104	40	90	50			2	54	07/25/99				Unstable
51-04-06	TX-104	40	80	40			1.5	42	01/21/00				
51-05-01	TX-105	40	80	40			1	39	01/22/00				BE - Cs-137
51-05-03	TX-105	25	80	55			1.5	51	01/22/00				Possible Sr-90 at 32 ft
51-05-05	TX-105	40	80	40			2	64	07/28/99				Sb-125
51-05-07	TX-105	40	80	40			2	64	07/28/99				BE - Cs-137
51-05-08	TX-105	40	80	40			0.75	33	03/09/01				BE - Cs-137

Table 4. Boreholes Projected for Monitoring During Third Quarter of FY 2002

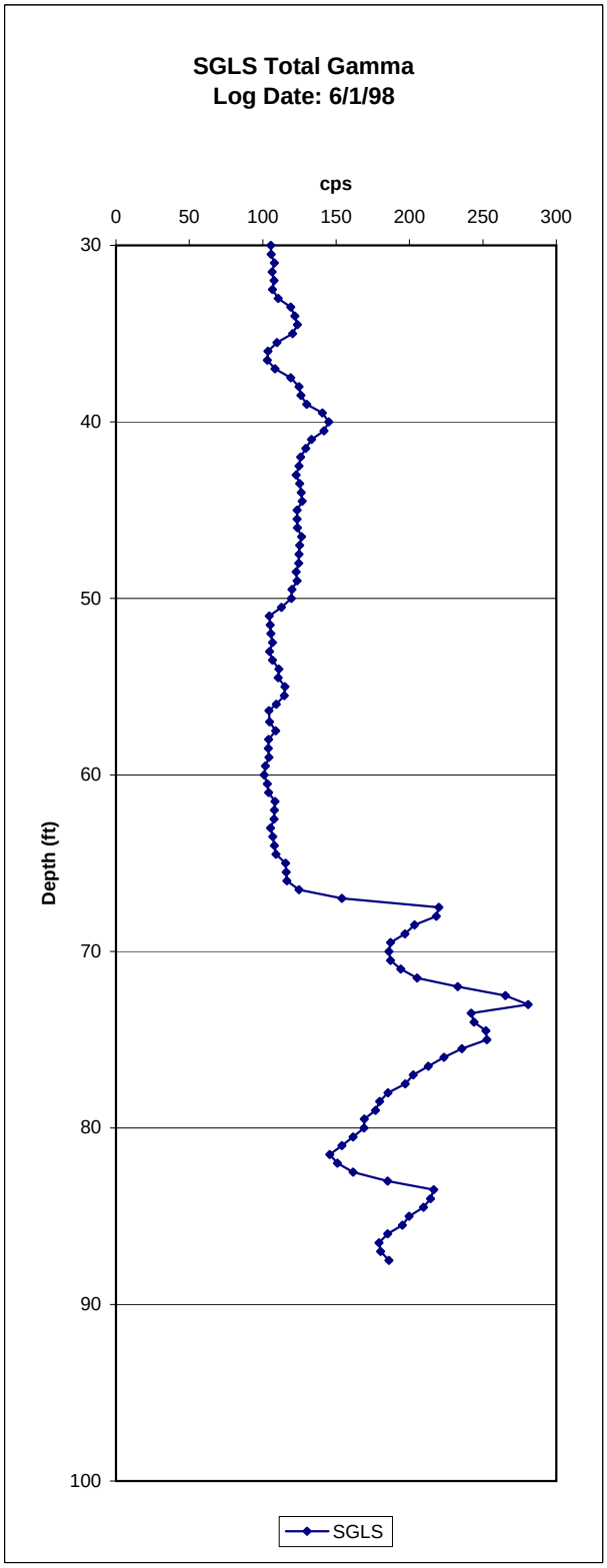
Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	RAS Event B	RAS Event C	Comment
51-14-04	TX-114	40	97	57			1	34	02/01/97				
51-14-08	TX-114	40	85	45			1	34	02/06/97				
51-14-11	TX-114	40	100	60			1	34	11/30/00				
51-16-04	TX-116	35	80	45			1	38	01/02/97				
52-03-03	TY-103	40	80	40			1	30	05/09/97				
52-03-06	TY-103	40	100	60			2	55	10/27/96				Unstable, 44-98 ft
52-03-12	TY-103	40	100	60			1	30	12/01/00				
52-05-07	TY-105	40	97	57			2	82	08/03/99				
52-06-04	TY-106	40	80	40			1.5	54	01/27/00				
52-06-05	TY-106	40	148	108			2	67	08/02/99				Unstable
52-06-06	TY-106	40	100	60			1.5	54	01/27/00				
52-06-07	TY-106	200	238	38			1	42	01/27/00				BE - Cs-137; Co-60 in GW
60-04-08	U-104	40	105	65		L	2	94	04/03/02	07/16/01	10/22/01	01/03/02	Apparent change (74-78 and 84-89 ft) not confirmed
60-05-04	U-105	35	73	38		L	1.5	44	01/22/02	07/16/01	10/24/01		No apparent change
60-07-01	U-107	40	99	59	10	L	2	85	03/26/02	07/12/01	10/04/01	12/26/01	Apparent change 83-88 ft not confirmed
60-07-02	U-107	35	100	65		L	0.75	53	03/26/02	07/12/01	10/04/01	12/26/01	Apparent decrease 90-100 ft
60-07-10	U-107	40	99	59		L	2	85	03/27/02	07/09/01	10/24/01	12/27/01	Apparent change (SGLS) 53-65 ft
60-07-11	U-107	40	100	60		L	2	85	03/27/02	07/12/01	10/24/01	12/27/01	Apparent change (SGLS) 73-95 ft
60-08-04	U-108	35	100	65	10	L	1.5	56	03/28/02	07/09/01	10/25/01	12/28/01	No apparent change
60-10-01	U-110	35	75	40		L	0	11	03/27/02	07/17/01	10/04/01	12/27/01	No apparent change
60-10-11	U-110	35	75	40		L	0	11	04/02/02	07/17/01	10/04/01	01/02/02	No apparent change

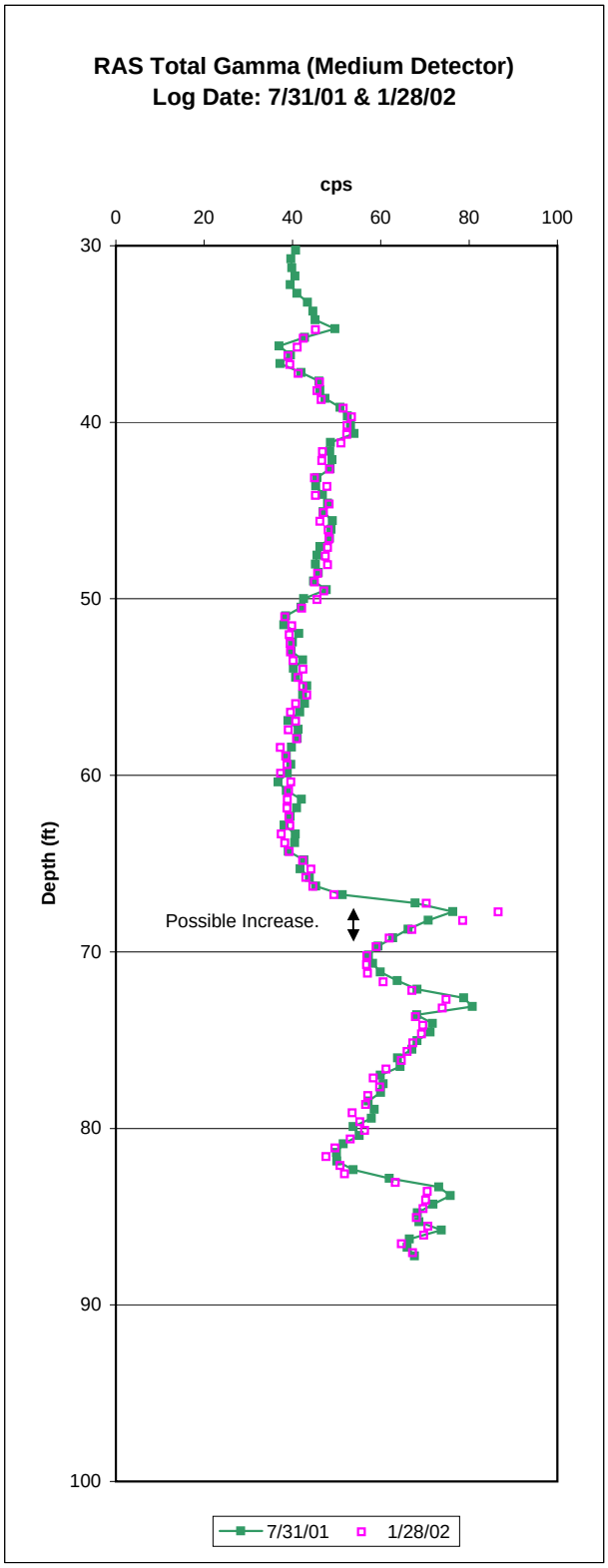
Borehole 21-27-08





Borehole 50-04-10





Borehole 50-09-02